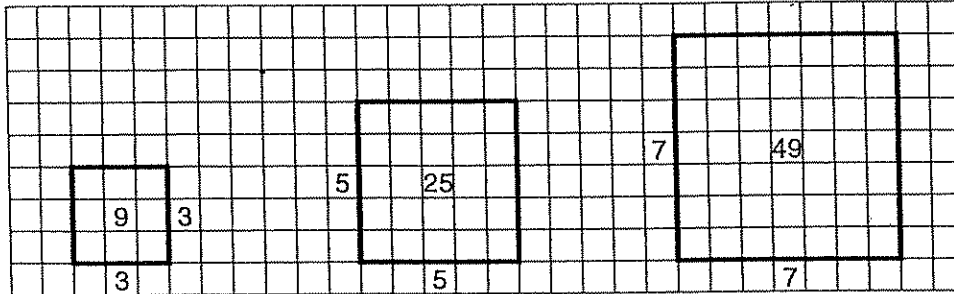


# Study Guide

## Squares and Square Roots

When you multiply a number by itself, you are finding the square of the number.

### Examples



$$3 \times 3 = 3^2 = 9$$

The square of 3 is 9.

$$5 \times 5 = 5^2 = 25$$

The square of 5 is 25.

$$7 \times 7 = 7^2 = 49$$

The square of 7 is 49.

If  $a^2 = b$ , then  $a$  is the square root of  $b$ . The symbol,  $\sqrt{\quad}$  called a **radical sign**, is used to represent a nonnegative square root. Read  $\sqrt{9}$  as “the square root of 9.”

### Examples

Find  $\sqrt{9}$ .

Since  $3^2 = 9$ ,

$$\sqrt{9} = 3.$$

Find  $\sqrt{16} = 4$ .

Since  $4^2 = 16$ ,

$$\sqrt{16} = 4.$$

Find  $\sqrt{64}$ .

Since  $8^2 = 64$ ,

$$\sqrt{64} = 8.$$

### Find the square of each number.

1. 9

2. 4

3. 10

4. 8

5. 24

6. 30

7. 15

8. 40

### Find each square root.

9. 4

10. 64

11. 16

12. 121

13. 400

14. 2,500

15. 144

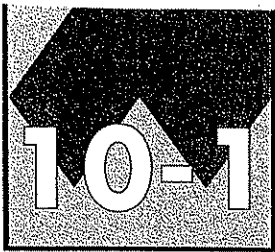
16. 169

17. 1

18. 36

19. 3,600

20. 100



Name \_\_\_\_\_ Date \_\_\_\_\_

## Practice

### Squares and Square Roots

*Find the square of each number.*

1. 4

2. 5

3. 8

4. 17

5. 9

6. 22

7. 40

8. 45

9. 31

*Find each square root.*

10.  $\sqrt{169}$

11.  $\sqrt{900}$

12.  $\sqrt{81}$

13.  $\sqrt{1,024}$

14.  $\sqrt{324}$

15.  $\sqrt{100}$

16.  $\sqrt{361}$

17.  $\sqrt{1,225}$

18.  $\sqrt{2,500}$

19.  $\sqrt{2,025}$

20.  $\sqrt{576}$

21.  $\sqrt{729}$

22. Find the length of the side of a square whose area is 1,156 in<sup>2</sup>.

23. Find the area of a square whose side is 38 cm.